exterior of device **10**. As an example, opening **24** and/or opening **104** at speaker housing wall **102**F may include mesh structures that prevent dust and other contaminants from entering an interior of device **10** (e.g., from entering an interior of speaker housing member **102**). If desired, antenna feed structure **90** may be formed on one or more of sealing member **114**, mesh structures, or other (dielectric) support structures disposed in opening **24**, in opening **104**, in cavity **106**, and/or between opening **24** and opening **104**.

[0083] If desired, device **10** may include a retaining member such as retaining member **116** such as a retaining bracket or other mechanical support structure. Retaining member **116** may surround, fully or only partially, the exterior of one or more speaker housing walls to ensure that speaker module **100** remains in place. For example, retaining member **116** may ensure the opening **24** remains aligned with opening **104**, may ensure that conductive adhesive **112**, sealing member **114**, and/or antenna feed structure **90** remain in place to properly perform their respective functions. Retaining member **116** may be attached to a housing structure such as housing sidewall **12**W by any suitable attachment structures (e.g., screw-based structures, adhesive, etc.).

[0084] The shape of speaker housing member **102** as described in connection with FIGS. **6** and **7** is merely illustrative. If desired, speaker housing member **102** may have any other desirable shape (e.g., a shape that is not a cuboid) such as an irregular cuboid shape, a shape having less than six faces, a shape having more than six faces, a shape having any desirable number of straight edges and any number of curved edges, and/or an irregular shape having extension and depressions to accommodate for other components in device **10** (e.g., to accommodate for a shape of housing components in device **10**, to accommodate for internal components of device **10**) and/or to tune the acoustic frequency response of speaker module **100**.

[0085] As shown in FIG. **7**, device **10** may include circuitry **130** at the front face of device **10** and circuitry **140** at the rear face of device **10**. Device **10** may also include other circuitry in the interior of device **10**. As examples, circuitries **130** and **140** may include display circuitry, touch sensor circuitry, antenna circuitry, wireless power circuitry, conductive traces, electronic component modules, and/or any other circuitry for any other functions in device **10** as disclosed in connection with FIG. **2**. As device **10** may be a small compact device, circuitries **130** and **140** and other internal circuitry may be formed in close proximity to the antenna structures shown in FIG. **7** such as opening **104** and antenna feed structure **94**. However, because opening **104** (e.g., the slot antenna resonating element for the antenna such as slot element **74** of FIG. **5**), antenna feed **62**, and antenna feed structure **90** are formed as part of speaker module **100** and surrounded by the grounded conductive speaker housing walls (to form cavity-backed antenna **40**), these antenna structures may be isolated from internal components of device **10** (e.g., circuitries **130** and **140**).

[0086] By forming antenna **40** based on a cavity-backed and indirectly fed slot antenna resonating element, the cavity-backed and indirectly fed slot antenna is placed in a well-controlled (e.g., well-isolated) location that is shielded from other internal components of device **10**, may have an easy and flexible configuration for tuning the antenna (e.g., by changing the configuration of antenna feeding structure **90**), and may have a linear polarization in a peak gain direction. Additionally, by providing the cavity-backed and indirectly fed slot antenna as described herein in a compact device such as a wristwatch device, the antenna structures may be appropriately sized (e.g., single continuous opening **24** on one side of sidewall **12**W may be appropriately sized when tuned using antenna feed structure **90**) to offer frequency coverage at higher frequencies such as frequencies in an ultra-wideband communications band between about 5 GHz and about 8.5 GHz.

[0087] FIG. **8** is a graph in which antenna performance (antenna efficiency) has been plotted as a function of operating frequency for antennas **40** in device **10** (FIG. **2**). As shown in FIG. **8**, curve **200** plots the antenna efficiency of antennas **40** in device **10** in the absence of the cavity-backed and indirectly fed slot antenna as shown and described in connection with FIGS. **6** and **7**. As shown by curve **200**, other antenna structures for antennas **40** (e.g., antenna structures formed from display circuitry, formed on rear housing antenna structures, formed from peripheral conductive structures, etc.) may support reasonable antenna efficiencies at relatively low frequencies such as frequencies in the GPS band at 1.5 GHz, the cellular midband from 1.4 GHz to 2.2 GHz, the cellular high band at 2.2 GHz, the 2.4 GHz WLAN/WPAN band, and any other relatively low frequency bands. However, these antenna structures may be unable to provide increased bandwidth to cover relatively high frequencies such as the frequencies in the UWB communications band from about 5.0 GHz to about 8.5 GHz.

[0088] Curve **202** plots the antenna efficiency of antennas **40** in device **10** in scenarios where the cavity-backed and indirectly fed slot antenna as shown and described in connection with FIGS. **6** and **7** are present. As shown by curve **202**, the other antenna structures for antennas **40** may still support reasonable antenna efficiencies at relatively low frequencies such as frequencies in the GPS band at 1.5 GHz, the cellular midband from 1.4 GHz to 2.2 GHz, the cellular high band at 2.2 GHz, the 2.4 GHz WLAN/WPAN band, and any other relatively low frequency bands. At the same time, the cavity-backed and indirectly fed slot antenna as shown and described in connection with FIGS. **6** and **7** may support efficiency peaks at higher frequencies such as frequencies in the UWB communications band from about 5.0 GHz to about 8.5 GHz. In this way, antennas **40** for device **10** may exhibit satisfactory antenna efficiency across each of these bands despite the constrained form factor of device **10**. The example of FIG. **8** is merely illustrative. In general, efficiency curve **202** may have other shapes. Curve **202** (i.e., antenna **40**) may exhibit efficiency peaks in any desired number of frequency bands and across any desired frequencies.

[0089] The foregoing is merely illustrative and various modifications can be made to the described embodiments. The foregoing embodiments may be implemented individually or in any combination.

What is claimed is:

1. An electronic device, comprising:

a speaker box having an interior surface that defines a cavity and having conductive structures formed on an exterior surface of the speaker box, the conductive structures having an opening that serves as an open end for the cavity; and